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Method for electro-erosion machining

The invention concerns electro-physical machining methods, in particular a method for electro-erosion machining. Methods for electro-erosion machining are known, wherein the current pulse have their peaks either at the beginning or at the end of the pulse or simultaneously at the beginning and at the end. Such methods do not allow for simultaneously achieving a maximum performance and a minimum abrasion of the electrode.

The object of the invention is to increase the performance of the process and the abrasion resistance of the electrode.

According to the proposed method, the current peak is shifted in relation to the beginning of the pulse by 15-45% of its total duration.

Fig. 1 shows the pulse form;

Fig. 2 shows the typical dependency of the power from the position of the current peak (in relative units) for the copper-steel pair 45.

Fig. 1 shows on its abscissa axis the time and on its coordinate axis the magnitude of the measured working current. The current peak is situated in the first half of the working pulse (15-45% of its total duration).

Fig. 2 shows on the abscissa axis the shifting time of the current peak and on the coordinate axis the abrasion resistance of the electrode.

Claim

Method of electro-erosion machining by means of current pulses, wherein each current pulse comprises a current peak, characterised in that the current peak is shifted in relation to the pulse beginning by 15-45% of its total duration in order to increase the performance of the process and the abrasion resistance of the electrode.

Caption of the figures:

Fig. 1:

1- J_a of the current peak

2- J_a of the current pulse

3-t of the shifting of the current peak

Fig. 2:

1 - optimum zone

2-t of the shifting of the current peak

3-t of the pulse